

REMARKS

This request for reconsideration is made in response to an Office Action dated March 13, 2003, in which the following rejections were made:

Claim 1 was rejected under 35 U.S.C. 112, second paragraph.

Claims 8 and 9 were rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. (02085543).

Claims 8 and 9 were rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al. (06015773).

Claims 8 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Shimano et al in view of Sakamoto et al. (06015773).

Claims 10 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe or Sakamoto or Shimano in view of Sakamoto in view of Hamaekers (U.S. Patent 5,966,996).

Applicants have amended claim 8 and canceled claims 10 and 11. The subject matter of claim 10 is now incorporated into claim 8. Thus, claims 8 and 9 are currently pending in the application. Claims 12-19 were subjected to restriction requirement and are currently withdrawn from consideration.

Claim 1 was rejected under 35 U.S.C. 112, second paragraph. Applicants believe that the Examiner made a typographical error in stating that claim 1 was rejected. Applicants assume that the Examiner intended to reject claim 8. Applicants have amended claim 8 to remove the objectionable term. Therefore, Applicants believe that rejection of claim 8 under 35 U.S.C. 112 should be withdrawn and claim 8 should be passed to issue.

Claims 8 and 9 were rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe. Amended claim 8 now recites a damper having a hub, an inertia mass body, a polymer elastic body such a rubber press-fitted between the hub and the inertia mass body from an axis direction thereof, wherein said polymer elastic body is a vulcanized and molded rubber elastic body; and an organosilane as a non-slip agent is provided at least one of between said hub formed by a metal member and said polymer elastic body and between said inertia mass body formed by a metal member and said polymer elastic body; wherein surface roughness in at least one of a metal surface adhering to the polymer elastic body in said hub

and a metal surface adhering to the polymer elastic body in said inertia mass body is within a range of 5 to 50 μmRz (JIS B0601).

The Examiner asserts that Watanabe "discloses a damper being a fitting type including a hub (figure 1 number 21), an inertia mass body (figure 1 number 3) and a polymer elastic body (figure 1 number 22)", (page 2 of the Office Action dated March 13, 2003). Applicants respectfully disagree with the Examiner's assertion for a number of reasons. First, Watanabe refers to numeral 21 as "mass body 21", not a hub, as indicated by the Examiner. Secondly, Watanabe indicates that numeral 3 refers to a "ring plate 3", not inertia mass body, as indicated by the Examiner. Finally, Watanabe discloses that a silane adhesive is preferably used for the adhesive connecting the rubbery elastic body 22. In contrast to disclosure of Watanabe, amended claim 8 of the present invention recites a polymer elastic body press-fitted between the hub and the inertia mass body. Watanabe does not disclose or show that a polymer elastic body is press-fitted between the hub and the inertia mass. As discussed above, Watanabe shows and teaches that a rubbery elastic body 22 is disposed between mass body 21 and a ring plate 3.

Furthermore, the Watanabe reference teaches a method of fixing the rubbery elastic body 22 between the mass body 21 and ring plate 3 including the steps of performing vulcanization and adhesion of unvulcanized rubber, Please see English translation of line 16, lower right column, page 2 to line 11, upper right column of the Watanabe reference:

"...Further, unvulcanized rubbery material is put between the ring plate 3 and the mass body 21 to which the adhesive is applied, and then vulcanization and adhesion are performed to form the dynamic damper 2.

Next, the dynamic damper with the above structure is manufactured by the following method.

First, oil etc., adhering to the respective bonding surfaces of the mass body 21 and the ring plate 3, is removed through trichloroethane, and the grit blasting treatment thereof is performed, and thereafter the degreasing thereof is performed again through trichloroethane.

Y-4310 (Road Co., name of commodity) to be silane adhesive is applied to the respective bonding surfaces of the above mass body 21 and ring plate 3, and the dying treatment thereof is performed at 50 degrees C for 10 minutes. At this time, the thickness of the adhesive is 4 μm . Then, the baking treatment thereof is performed at 80 degrees C for 20 minutes..."

Thus, the Watanabe damper is formed by arranging the “mass body 21, silane adhesive, unvulcanized rubber, silane adhesive and ring plate 3”; heating them at 180° for 20 minutes; and performing the adhesion of the mass body unvulcanized rubber and ring plate 3. Therefore, the damper of the Watanabe reference is an adhesion type damper described in the background art portion of the present specification. Thus, Watanabe does not disclose a polymer elastic body press-fitted between the hub and the inertia mass body, as specifically recited in amended claim 8 of the present invention. Since the Watanabe reference does not disclose or show what amended claim 8 specifically recites, the Watanabe reference does not anticipate amended claim 8 of the present invention. Therefore, rejection of claim 8 under 35 U.S.C. 103 should be withdrawn and claim 8 passed to issue.

Claim 9 depends from claim 8 and recites additional subject matter. Therefore, for at least the reasons discussed above, the Watanabe reference does not anticipate claim 9 of the present invention. Therefore, rejection of claim 9 under 35 U.S.C. 102 should be withdrawn and claim 9 passed to issue.

Claims 8 and 9 were rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto. The Examiner asserts that Sakamoto “discloses a damper being a fitting type including a hub (abstract line 7), an inertia mass body (abstract line 7) and a polymer elastic body such as rubber (abstract line 6) press-fitted between the hub and the inertia mass body from an axis direction thereof (abstract lines 6-8)” (page 4 of the Office Action dated March 13, 2003). Applicants respectfully traverse Examiner’s characterization of the Sakamoto reference. The Abstract of the reference does not disclose a damper being a fitting type including a hub, an inertia mass body, and a polymer elastic body such as rubber press fitted between the hub and the inertia mass body. Rather, the reference discloses compound-type-damping material arranged between two metal plates (Abstract of the Sakamoto reference). More specifically, the Sakamoto reference relates to damping metal plate, which firmly sticks a viscoelastic resin between two metal plates by a silane adhesive and merely discloses adhesion of a viscoelastic body by the silane adhesive. Additionally, the damping material disclosed in Sakamoto does not and could not withstand the forces of a damper as disclosed in amended claim 8 of the present invention. For a rejection under 35 U.S.C. 102 to be valid, each element must be disclosed in the cited reference. In this situation, the Sakamoto reference does not disclose each and every element as recited in amended claim 8. Therefore, rejection of claim 8 under 35 U.S.C. 102 should be withdrawn and claim 8 passed to issue.

Claim 9 depends from claim 8 and recites additional subject matter. Therefore, for at least the reasons discussed above, the Sakamoto reference does not anticipate claim 9 of the present invention. Therefore, rejection of claim 9 under 35 U.S.C. 102 should be withdrawn and claim 9 passed to issue.

Claims 8 and 9 were rejected under 35 U.S.C. 103 as being unpatentable over Shimano in view of Sakamoto. The Examiner states that Shimano discloses a damper being a fitting type including a hub and a polymer elastic body such as rubber press fitted on the hub. Applicants respectfully traverse the Examiner's characterization of the reference. The Shimano reference does relate to a damping material with a metal fitting. However, Shimano specifically teaches performing an antirust chromate treatment of a metal surface, application of a silane adhesive, and then firmly sticking rubber thereto. Thus, if anything, the Shimano reference teaches away from amended claim 8 of the present invention which specifically recites an inertia mass body and a hub with a polymer press-fitted therebetween. Shimano does not teach or even remotely suggest having an inertia mass body and a hub with polymer elastic body press-fitted therebetween. If anything, the Shimano teaches away from press-fitting a polymer elastic body. Additionally, the Shimano reference also teaches away from applying an organo-silane between the inertia mass body and elastic body by placing an anti rust chromate treatment therebetween. Furthermore, the Shimano reference does not relate to a torsional damper, as recited in claim 8 of the present invention. Moreover, the Shimano reference discloses the use of silane adhesive for preventing the anti rust chromate treatment from being broken and therefore is different from the recitation of claim 8.

The Sakamoto reference does not add to the teachings of the Shimano reference. More specifically, the Sakamoto reference does not specifically teach or disclose a hub and an inertia mass body with a polymer elastic body press-fitted therebetween. Moreover, the Sakamoto reference does not teach a torsional damper as recited in amended claim 8 of the present invention.

For a rejection under 35 U.S.C. 103 to be valid, a motivation or teaching to combine two references must be present in either reference. Neither the Shimano reference nor the Sakamoto reference includes such a teaching or motivation to combine. However, even if the two references were combined, the combination still does not teach a torsional damper as recited in amended claim 8 of the present invention including a hub, an inertia mass body

with a polymer elastic body press-fitted therebetween. Therefore, rejection of claim 8 under 35 U.S.C. 103 should be withdrawn and claim 8 passed to issue.

Claim 9 depends from claim 8 and recites additional subject matter. Therefore, for at least the reasons discussed above, the Sakamoto reference does not anticipate claim 9 of the present invention. Therefore, rejection of claim 9 under 35 U.S.C. 103 should be withdrawn and claim 9 passed to issue.

Claims 10 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe or Sakamoto or (Shimano in view of Sakamoto) in view of Hamaekers. Although claims 10 and 11 have been canceled, the subject matter of claims 10 and 11 was incorporated into amended claim 8. Therefore, Applicants will address Examiner's rejection. As discussed above, neither of the cited references discloses, teaches or even suggests what amended claim 8 of the present invention recites. The Hamaekers reference does not add to the disclosures of the previously cited references. Hamaekers discloses an annular vibration damping machine element and relates to a method of adhesively bonding the extension piece (FW, pulley element) and the machine element. However, the Hamaekers reference merely teaches that each metal surface on the bonding side preferably has coarse surface roughness. The teaching of Hamaekers fails to disclose the physical adhesive mechanism exerted between the organisaline and the metal surface and the optimum value thereof as specifically recited in amended claim 8 of the present invention.

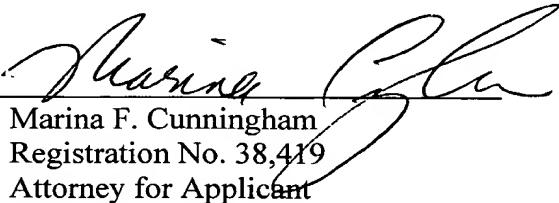
For rejection under 35 U.S.C.103 be valid, a motivation or suggestion to combine two or more references must reside in either of the cited references. Such a suggestion or motivation to combine is not found in either cited reference. However, even if the references were properly combined, the combination still does not teach what amended claim 8 of the present invention recites. Therefore, rejection under 35 U.S.C. 103 should be withdrawn and claims 8 and 9 passed to issue.

As Applicants have addressed all objections and rejections raised by the Examiner, it is respectfully requested that the Examiner reconsider and withdraw the stated objections and rejections, allow claims 8 and 9 and pass the present application on to issuance.

Applicants hereby petition for a two (2) months extension of time and include herewith a check in the amount of \$410.00 as payment for the two-month extension of time. In the event additional fees or charges are due, please charge them to Deposit Account 13-0235.

Respectfully submitted,

By



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